

**WHAT IS CLAIMED IS:**

1. Use of an effective amount of an F4<sup>+</sup> non-pathogenic *Escherichia coli* strain to promote growth in an animal.
- 5 2. Use of an effective amount of an F4<sup>+</sup> non-pathogenic *Escherichia coli* strain to homogenize growth among a herd of animals.
3. The use according to claim 1 or 2, wherein said effective amount of F4<sup>+</sup> non-pathogenic *Escherichia coli* strain is associated with a feed acceptable carrier.
- 10 4. The use according to any one of claims 1 to 3, wherein the effective amount is at least about 5<sup>E7</sup> CFU of F4<sup>+</sup> non-pathogenic *Escherichia coli* strain per animal.
5. The use according to claim 4, wherein the effective amount ranges from about 5<sup>E7</sup> to about 5<sup>E9</sup> CFU of F4<sup>+</sup> non-pathogenic *Escherichia coli* strain per animal.
- 15 6. The use according to any one of claims 1 to 5, wherein the F4<sup>+</sup> non-pathogenic *Escherichia coli* strain consists of the *Escherichia coli* strain deposited at the International Depository Authority of Canada (IDAC) on January 21, 2005 under accession number IDAC 210105-01, mutants or variants thereof.
- 20 7. The use according to any one of claims 1 to 6, wherein the animal or animals is or are selected from the group consisting of a post-weaning animal and a post-hatching animal.
8. The use according to claim 7, wherein the post-weaning animal is aged from about 10 to about 28 days old.
- 25 9. The use according to claim 7, wherein the post-hatching animal is aged from about 1 to about 7 days old.

10. The use according to claim 7 or 8, wherein the post-weaning animal is a pig.
11. The use according to claim 7 or 8, wherein the post-weaning animal is a mouse.
12. The use according to claim 7 or 9, wherein the post-hatching animal is poultry.
13. The use according to claim 12, wherein poultry is a chicken.
14. Method of promoting growth in an animal, said method comprising the step of feeding said animal with an effective amount of an F4<sup>+</sup> non-pathogenic *Escherichia coli* strain.
- 10 15. Method of homogenizing growth among a herd of animals, said method comprising the step of feeding said animals with an effective amount of an F4<sup>+</sup> non-pathogenic *Escherichia coli* strain.
16. The method according to claim 14 or 15, wherein the animal is fed orally.
17. The method according to any one of claims 14 to 16, wherein the animal is fed with the F4<sup>+</sup> non-pathogenic *Escherichia coli* strain in association with a solid or liquid feed acceptable carrier.
- 15 18. The method according to claim 17, wherein the solid feed acceptable carrier is a common solid feedstuff.
19. The method according to claim 17, wherein the liquid feed acceptable carrier is water.
- 20 20. The method according to claim 17, wherein the liquid feed acceptable carrier is milk.
21. The method according to any one of claims 14 to 20, wherein the effective amount is at least about 5<sup>E7</sup> CFU of F4<sup>+</sup> non-pathogenic *Escherichia coli* strain per animal .
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22. The method according to claim 17, wherein the effective amount ranges from about  $5^{E7}$  to about  $5^{E9}$  CFU of F4<sup>+</sup> non-pathogenic *Escherichia coli* strain per animal .

5 23. The method according to any one of claims 14 to 22, wherein the F4+ non-pathogenic *Escherichia coli* strain consists of the *Escherichia coli* strain deposited at the International Depository Authority of Canada (IDAC) on January 21, 2005 under accession number IDAC 210105-01, mutants or variants thereof.

10 24. The method according to any one of claims 14 to 23, wherein the animal is selected from the group consisting of a post-weaning animal and a post-hatching animal.

25. The method according to claim 24, wherein the post-weaning animal is aged from about 10 to about 28 days old.

15 26. The method according to claim 24, wherein the post-hatching animal is aged from about 1 to about 7 days old.

27. The method according to claim 24 or 25, wherein the post-weaning animal is a pig.

28. The method according to claim 24 or 25, wherein the post-weaning animal is a mouse.

20 29. The method according to claim 24 or 26, wherein the post-hatching animal is poultry.

30. The method according to claim 29, wherein poultry is a chicken.